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## ECONOMIC GEOGRAPHY:

AN ATTEMPT TO STATE WHAT IT IS AND WHAT IT  
IS NOT.

EDWARD VAN DYKE ROBINSON.

Geography is the study of the earth in relation to life,—that is, of physical environment and organic responses. Geography consequently draws its material from all the physical sciences—physics, chemistry, astronomy, geology—and also from the biological sciences, including in a broad sense not only botany and zoölogy, but also anthropology, which considers man as an animal and ruled by necessity.

Until the time of Ritter in Germany, and as late as 1890 in the English speaking world, geography was conceived as the description rather than the study of the earth. It was, in fact, the geography of position, rather than of distribution in a dynamic sense. The standing injunctions were consequently “locate and describe”; and students spent their time learning endless and senseless lists of rivers, capes, bays, counties, capitals, and boundaries, which they were, however, enabled by a merciful provision of nature speedily to forget. Ritter introduced a teleological conception of the world, believing it specially made and adapted for the uses of man. This conception is illustrated clearly, though crudely, by the remark attributed to a famous preacher, that it was “so kind of the Lord to have made the great rivers run through the great cities.”

Finally, as a consequence of the Darwinian revolution in biology, came the doctrine that all forms of life are

gradually adapted to their environment; and it is on this doctrine that modern geography rests. This adaptation is organic and passive in the case of plants and animals, and even of man so far as his body is concerned; but it is functional and active in the case of man's economic activities. Thus an elephant transported to Siberia would have to grow a woolly covering, like the mammoth which once inhabited those regions, or perish; but man consciously adapts his mode of life to his physical and social environment, led by considerations of self-interest. And it is this active, conscious type of adaptation, under the spur of economic motives, which forms the subject matter of economic geography. Economic geography thus introduces a new element—the psychic nature of man—and is consequently the point of contact between the sciences dealing with external nature and the sciences dealing with human society.

While geography was thus extending its field toward, and in fact across, the line separating it from economics, a similar expansion has occurred in economics. We consequently have today, in several American universities, courses in economic geography, under various names, offered both in the departments of geology (the mother-science of modern geography) and economics: and not a little doubt seems to exist as to what economic geography really is—whether it is geography, or economics, or a hybrid compound without true scientific unity.

Adam Smith, the most concrete of the classical economists, was keenly interested in the production of wealth; but with Ricardo the interest shifted to problems of distribution, which came to be regarded as the principal part of *political* economy, meaning the aspects of private business that are of public concern. So far as production was studied by the Ricardian school, emphasis was placed on

the part played by capital, and consequently on the importance of capital building as the source of economic progress. Land and other natural resources, on the other hand, were considered chiefly as sources of economic rent. Moreover, the method of reasoning, being abstract and systematic, was unfavorable to any regional treatment of the subject. Nevertheless, the economic importance of division of labor was clearly recognized, from Adam Smith down; and, when supplemented by the theory of comparative costs, elaborated by Cairnes and others, this doctrine was ready for a regional development. In other words, it tended to emphasize the advantages of the geographic distribution of labor. After the Historical School of economists had introduced the idea of relativity as to time and place, the necessity was apparent not only for a historical but also for a regional treatment of economic phenomena,— in other words, for economic history and economic geography.

The actual parentage of economic geography as a school study is, however, to be traced neither to geography nor to economics, but to certain compendia of unrelated scraps of information concerning anything and everything “useful for a merchant to know” which came into use in commercial schools during the eighteenth century; and it must be confessed that economic geography still bears not a few marks of its origin. Thus Scherzer’s book (1885) which formed the basis of Chisholm, really belonged to *Wirtschaftskunde*, as this purely practical study is called; and through Chisholm the same encyclopedic and descriptive character has been impressed upon most of the English and American texts published in recent years. This juxtaposition of unconnected and undigested facts, of every degree of importance and unimportance, is perhaps most striking in works and in chapters

dealing with commodities and industries at large in place of upon a regional basis. *Wirtschaftskunde*, "whatever is useful for a merchant to know," is the first thing which, in my opinion, economic geography is not.

In most of the early works on *Wirtschaftskunde*, geography was either ignored or played a very subordinate role, as is indeed the case even in the best of the modern works, such as Oppel's "Natur und Arbeit." But the trading interests of the classes represented in the commercial schools gave rise, as early as the eighteenth century, to a special Trader's Geography (*Kaufmannsgeographie*, *Verkehrsgeographie*, *Handelsgeographie*), which is still represented in the lower and middle commercial schools of Europe by many compendia of miscellaneous facts regarding transportation and trade. It was from this class of works that Chisholm borrowed the name "commercial geography". So far as it is true to its name and parentage, commercial geography deals with accomplished facts rather than causes or tendencies, and with the movement or circulation of goods rather than the fundamental process of production. It thus lacks a causal or other rational interpretation for its masses of empirical facts, and is consequently driven to use the memoriter method almost exclusively. In practice this means that the pages of most of the books are filled with dollars and bushels and tons, in lieu of principles; and that, as some one has well said, the old lists of capes, islands, and bays have been replaced by equally useless lists of exports and imports, which, moreover, have the further disadvantage that they become obsolete over night. Commercial geography, therefore, is also in my opinion what economic geography is not.

What, then, is economic geography? Our friends the geographers would doubtless answer: economic geogra-

phy traces the influence exercised by physical environment upon economic activities. As I conceive it, economic geography does that, and much more: namely, it seeks to ascertain and explain the geographic division of labor,—that is, the localization of industries, in terms not alone of physical environment, but of all the factors involved, cultural as well as physical. It is thus a unified scientific discipline connecting with classical economics through the doctrines of division of labor and comparative costs, and using as material all such facts, and only such facts, as can be shown to have relation to the geographic division of labor. Moreover, it deals with principles rather than details; its method is in the main analytical rather than descriptive; and its controlling purpose is to establish scientific truth rather than to serve practical utility. No fact, in other words, belongs in economic geography merely because it is “useful for merchants to know”; nor is any fact excluded which bears on the geographic division of labor, however remote it may be from the physical environment. But no unrationalized fact has any place in economic geography except such as an “unknown” occupies in a chemical laboratory,—that is, as a problem to be solved.

In accordance with its purpose, economic geography will therefore consider first, under the head of natural controls, how relief, climate, soil, minerals, and other natural resources influence the geographic division of labor. It will next consider, under the head of human controls, race, religion, language, nationality, and government in so far, and only in so far, as they clearly affect the geographic division of labor. And finally it will consider, under the head of economic controls, to what extent transportation, the machinery of exchange, the supply, skill, and standard of living of labor, the supply,

efficiency, and cost of capital goods, the organization of the factors of production, the methods of production, the principle of competitive and complementary industries, and other economic factors, determine the geographic division of labor. Thus economic geography has no concern in general with weights and measures, or money, or banks, or the whole technique of trade; but if it can be shown, for example, that the metric system gives Germany an advantage over Great Britain in South American markets, then the metric system becomes to that extent a factor in the geographic division of labor,—that is, it tends to locate the economic complement of the wheat fields and cattle ranches of Argentina in Germany rather than England. Or, if it is true that the payment of interest on bank reserves in the United States drains money from the country into certain great cities and gives them in consequence a lower interest rate, then the reserve system becomes a factor in concentrating industries and population in the great cities and therefore in determining the geographic division of labor. Again, economic geography does not undertake the general description of methods of production: that is the business of technology. But when the Bessemer process of steel-making came into use, requiring ores free from certain impurities, it caused a migration of the steel industry into districts accessible to such ores. Whenever such a readjustment occurs, the new process must be treated in economic geography, not because it is important or “useful for merchants to know,” but because it has become a factor in the geographic division of labor.

After the general or systematic treatment of controls, some of the books adopt the regional plan, others divide the matter according to commodities or industries, and a few attempt to blend the two methods, treating the cot-

ton industry, for example, the world over, both in its agricultural and manufacturing phases, in connection with the South. If the foregoing considerations as to the scope and purpose of the subject are valid, there would seem to be no warrant for such diversity of theory and practice.

The control of industry by physical environment is logically first, since it underlies and conditions all others, even though, as often happens, other controls have become dominant. For this reason, every scientific treatment of economic geography must begin with the natural controls. But it is obvious that relief, soil, climate, and natural resources present striking differences in different regions, consequently the only method by which these differences can be analyzed and the natural control of industry can be adequately arrived at, is the regional method.

In considering each region, moreover, all the different kinds of controls are encountered, though in simpler and more stable combinations, which exist in the world at large; and there is the added advantage, since the connection of economic activities with the soil is more obvious, that the problem of the geographic division of labor is relatively simple and concrete compared to the problem presented by the world economy, with its bewildering complexity and shifting combinations of factors. It follows, therefore, that the intensive regional study of the world, or of some considerable portion of it, must logically precede and form the training for the broader and more difficult generalizations involved in the study of the great world industries,—that is, those producing staple commodities for which there is a world market.

It remains to consider briefly the relation of economic geography to geography, to economics, and to agricultural economics.



Economic geography derives its data relating to man's physical environment from geography, as geography in turn derives its data relating to inorganic and organic nature from the physical and biological sciences; but economic geography is not, for that reason, a part of geography, any more than geography is, for the same reason, a part of astronomy or geology or botany or zoölogy.

Moreover, as already indicated, the natural control of industry is only one of three classes of controls. Besides land, labor and capital are necessary to production, and variations in either labor or capital will affect the localization of industries quite as much as differences in physical environment; yet the facts as to labor and capital are furnished by economic history or economics proper, not by geography. For example, oats is a cool-temperate crop, yet it is grown more or less throughout the South, where the yield falls as low as fifteen bushels per acre, because it can be planted in the fall and harvested between the seasons for cultivating and picking cotton,—in other words, because it is a complementary rather than a competing crop. Again, textile mills are frequently located in steel towns, both in eastern Pennsylvania and in the Rhine country, because of the large number of unemployed women and girls in such communities. Further, Troy, N. Y., manufactures the bulk of the collars and cuffs made in America. Is there perhaps something in the soil or climate of Troy which causes this industry to flourish there? The fact is, of course, that it is due merely to an early start, acquired business connections and prestige, and the formation of a "pool" of skilled labor. Indeed physical environment alone is inadequate to explain the use or disuse of soil and other natural resources. For example, the land in the suburbs of Minneapolis is as well adapted by nature to the growth of wheat as land a

hundred miles away; but it is not, and cannot be, used commercially for that purpose because it has become so valuable that crops yielding a larger return per acre must be planted. And the majority of the mineral deposits in the world are still, and perhaps will always be, economically useless because of considerations based on labor supply, transportation, or markets.

Further, not only are the data of economic geography predominantly derived from other sources than geography, but in reasoning concerning even those data which do come from geography, economic categories are and must be employed. Natural resources indeed—soil, forests, waterpower, minerals—are due to nature, but products are due to man. The natural control of industry must consequently be transmuted into human motives or it remains ineffective. In determining whether or what he will produce, man—the individual man on whose initiative production in the last analysis depends—balances the marginal cost to himself of the effort and sacrifice against the marginal utility to himself of the resulting products, or of their equivalents in other goods; and nature enters into his calculations only as it enables him to produce more goods or at less cost. In other words, natural control is effective only in so far as it becomes transformed in the mind of the producer into considerations of utility,—that is, under modern conditions, of exchange value. And where psychic considerations relating to utility and value enter, there, if anywhere, geography surely ends and economics begins.

In view of the fact that economic geography depends on other sciences than geography for many, if not most, of its data, and necessarily employs economic categories in handling all its data, it would seem a fair inference that economic geography is not a part of geography, nor

yet a mongrel compound of geography and economics, but an integral part of economics. For the same reasons, it would appear that economic geography cannot be adequately handled except by a trained economist.

The relation of economic geography to economics may be further characterized as that of physical basis to theoretical superstructure. It is indispensable, as economic history is indispensable, to establish the facts regarding the development and present localization of industry, which facts, fundamental as they are, economics must otherwise take for granted. To state the matter more practically, to attempt to instruct students in theoretical economics, who know little or nothing of the world of industry from which these theories are derived, is like attempting to make bricks without straw.

The relation of economic geography to agricultural economics, another recent development of economic science, is still imperfectly defined. Both deal in part with the same material; in fact, agricultural economics furnishes to economic geography many important facts and principles, such as the distinction between competitive and complementary crops. But they differ radically in purpose and scope. Economic geography has to do with all classes of industries—extractive, manufacturing, and distributive—in so far as they can be related to the geographic division of labor: agricultural economics, on the other hand, is limited to one industry, or group of industries, which it studies in detail with a view to enlarged returns, both for the individual and for society at large. Agricultural economics does not, it is true, carry its investigations into agricultural technology,—that is, the practical handling of soils, machinery, and crops; but it does deal with everything pertaining to the business side of farming, on the theory that “the state prospers when the

people prosper," and that, in consequence, the most efficient and economical production and marketing of agricultural products is an aspect of private business which is preëminently of public concern.